PSEUDOCOSSINAE: A NEW SUBFAMILY OF COSSIDAE (LEPIDOPTERA)[1]

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ABSTRACT: Pseudocossinae, new subfamily, is named and diagnosed for three genera in Cossidae: *Pseudocossus* Kenrick (type-genus), *Chilecomadia* Dyar, and *Rhizocossus* Clench. *Pseudocossus* is from Madagascar and the other genera are from Chile. Pseudocossinae have proto-tympanal organs on the anterior abdominal sternite.

Recent review of Lepidoptera classification for a book to be published soon on Lepidotera families (Heppner, 1984) and for the Atlas of Neotropical Lepidoptera (W. Junk Publ., The Hague, Netherlands) has indicated the need for a new subfamily name for a group of primitive genera in Cossidae. Since the name is needed for these two publications, I propose the new subfamily at this time.

Pseudocossinae, new subfamily

Type-genus: *Pseudocossus* Kenrick, 1914. Trans. Ent. Soc. Lond., 1913: 590.

Diagnosis: Adults medium sized (wingspan ca. 30-45 mm); head somewhat roughened on vertex, antenna filiform (somewhat serrate ventrally), ocelli present (*Pseudocossus*) or absent, compound eye large, labial palpus upturned with small terminal segment; thorax with legs having arolium between tarsal claws; forewing venation typical for family but pterostigma absent, cubital veins connate at base (*Pseudocossus*) or separated, CuP merged with anal veins near tornus (*Pseudocossus*) or nearly so, median vein in discal cell single or forked; hindwing with no crossvein from Sc to Rs at base; abdomen with proto-tympanal organ as a lateroventral invagination on anterior sternite; male genitalia with rounded uncus (slightly bifid), valva simple, saccus reduced; female with setose ovipositor, simple ostium and bursa copulatrix.

Immature Stages: Unknown.

Remarks: The new subfamily is proposed for one Ethiopian and two Neotropical genera of primitive Cossidae, first noted for their unique characteristic by Clench (1957, 1959). These genera are the Madasgascar endemic *Pseudocossus* Kenrick, 1914, with two known species, and the Chilean genera *Chilecomadia* Dyar, 1937, with two species, and *Rhizocossus* Clench, 1957, with one species. The characters demonstrating the primitive nature of these genera in relation to other Cossidae, as well as in definition of Pseudocossinae, primarily involve the so-called proto-tympanal organs

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on the anterior abdominal sternite. These proto-tympanal organs are not as developed as the more advanced tympana found in *Dudgeonea* (Dudgeoneidae). *Pseudocossus* additionally has ocelli, but the two Chilean genera do not. The Indian genus *Catopta* and the Australian *Idioses* also have ocelli and may also belong to Pseudocossinae. The remainder of the Cossidae, as well as Metarbeliadae and Dudgeoneidae, do not have ocelli (except as noted above for two genera) and lack proto-tympanal organs, except that Dudgeoneidae have developed enlarged tympanal organs. There may be other Cossidae with a simple abdominal invagination similar to a proto-tympanal organ, but this requires further study.

The three genera here included in Pseudocossinae also have very similar male genitalia, as pointed out by Clench (1959), particularly in lacking the long beak-like uncus characteristic of most Cossidae, as well as Dudgeoneidae. *Pseudocossus* clearly is the more distinct genus of the subfamily and shows more affinities to some proto-Dudgeoneidae stem lineage than do the Chilean genera. The extent of the parameters of Pseudocossinae will undoubtedly continue to change as more cossids are discovered in remote areas of the world, particularly in the Gondwanaland refugia (South Africa, Madagascar, Assam, New Zealand, Chile) that involve the habitats of Pseudocossinae. This fact is likewise true for most higher categories of Lepidoptera. Thus far at least, the three genera herein included in Pseudocossinae clearly demonstrate a set of characters distinctive enough among Cossidae to require a separate higher category to adequately delimit their distinctions within the family.

LITERATURE CITED

Clench, H.K. 1957. Cossidae from Chile (Lepidoptera). Mitt. Münchner Ent. Ges. (Munich), 47: 122-142.

_____. 1959. On the unusual structure and affinities of the Madagascan genus *Pseudocossus* (Lepidoptera: Cossidae). Rev. Franc. Ent. (Paris), 26: 44-50.

Heppner, J.B. 1984. Lepidoptera family classification. A guide to the higher categories, world diversity and literature resources of the butterflies and moths. Medford, NJ: Plexus Publ. (ca. 1200 pp.)

ERRATA

In the March-April 1984 issue of ENT. NEWS, an article appeared entitled "A Spate of Glowworms" by Steven R. Wing. In that paper the words Phengodidae and phengodid(s) were misspelled four times: in the title, and on lines 1, 5, and 13. The correct spelling should be Phengodidae and phengodid(s). Both the author and the editor regret these errors.